

Bitrate challenges

Demystifying
high speed networks

salumanus.com





Technology Overview



Transceivers and applications



Where we could use it?



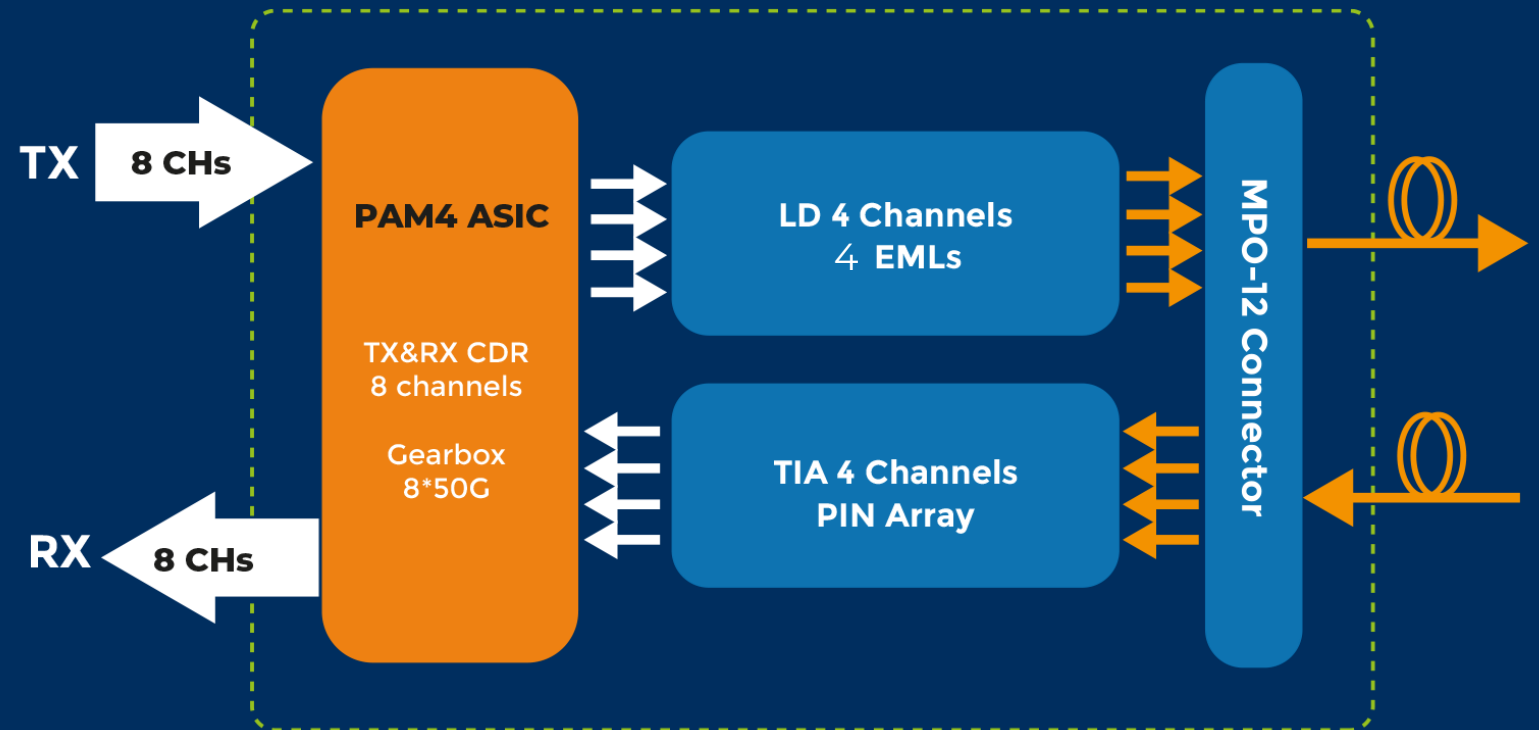
What future will bring?



Q&A

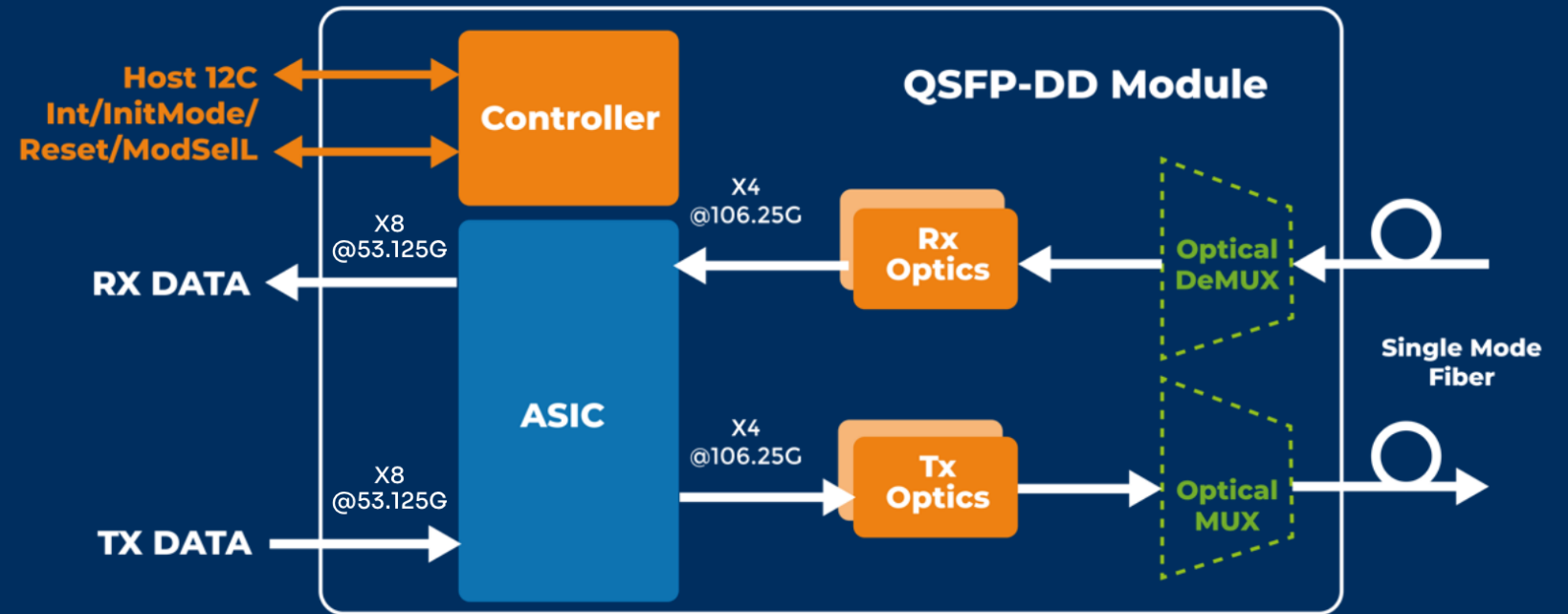
Types of 400G transceivers

QSFP-DD
4x 100G



Types of 400G transceivers

QSFP-DD
400G



QSFP-DD Coherent solution



OIF 400ZR

DCI



16 QAM < 120km distance

IOF 400ZR



OpenZR+

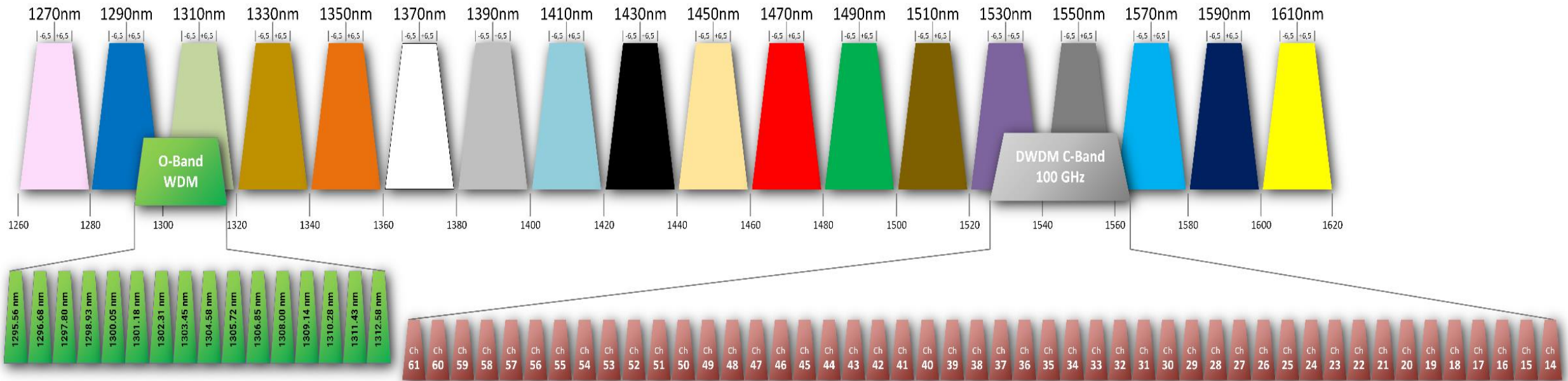
Metro, Regional and LH



16 QAM/8QAM/QPSK > 600km

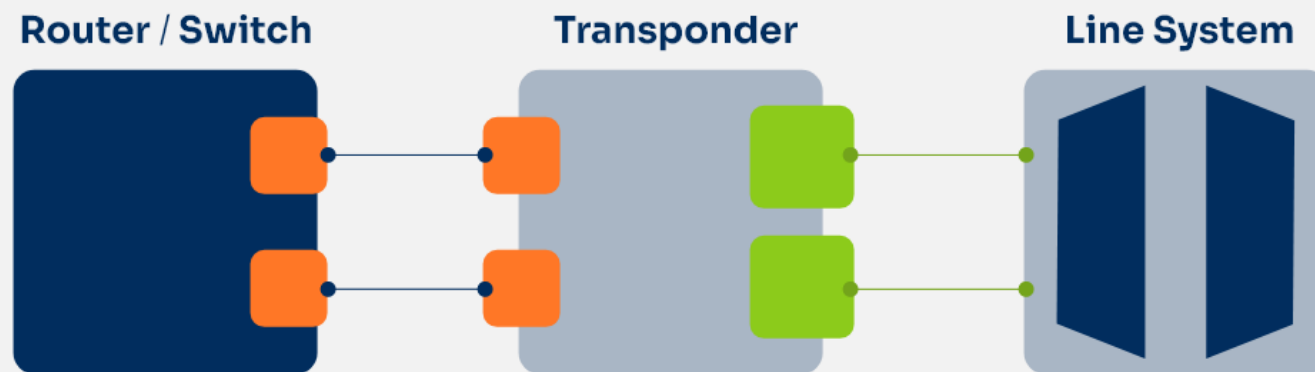
MSA Open ZR+

CWDM+DWDM+O-Band

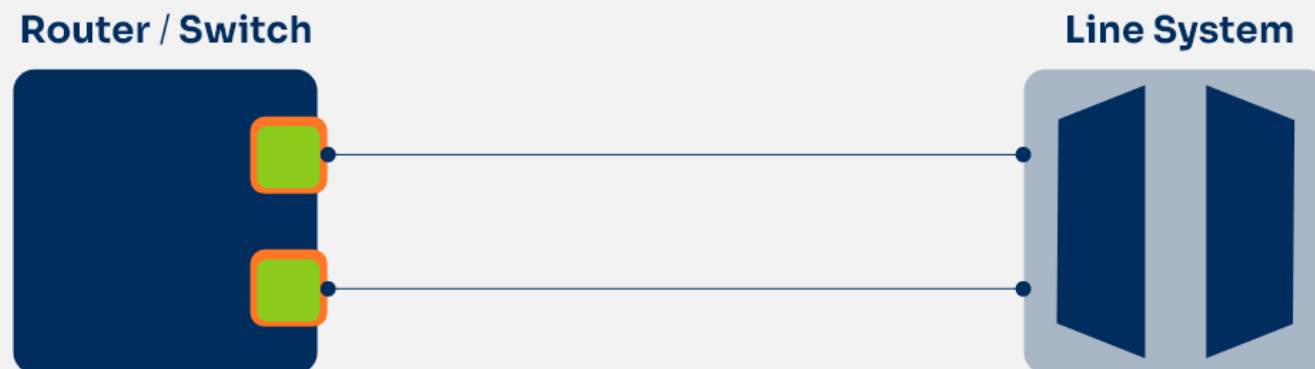


What is IP over DWDM

Traditional DWDM Model

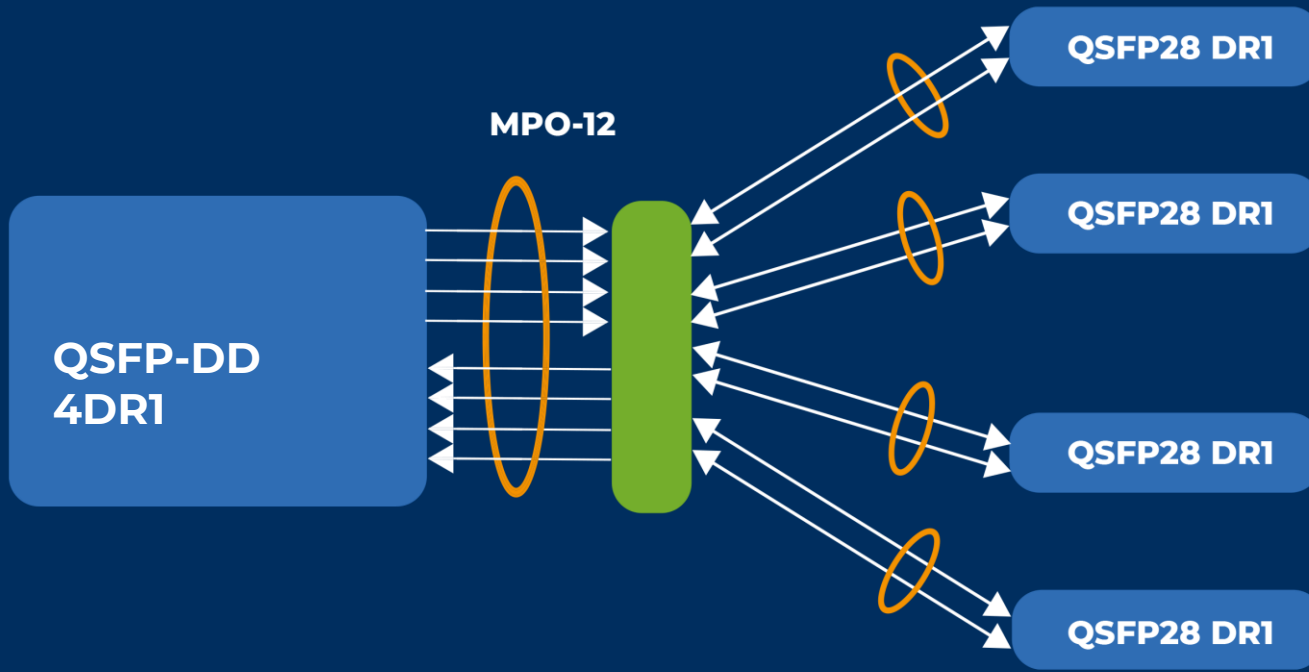


IP-over-DWDM



Connecting two generation.

400G to 4x100G

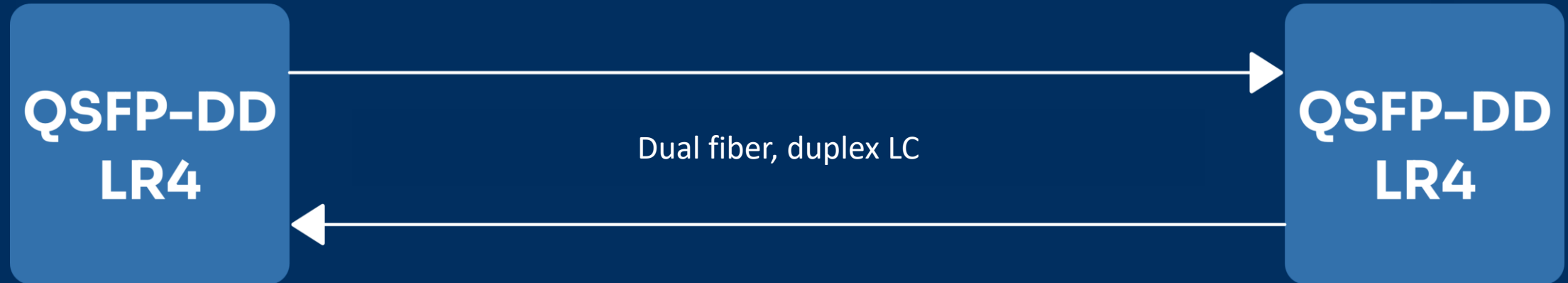


Most popular: QSFP-DD 4FR1 & QSFP-DD 4LR1



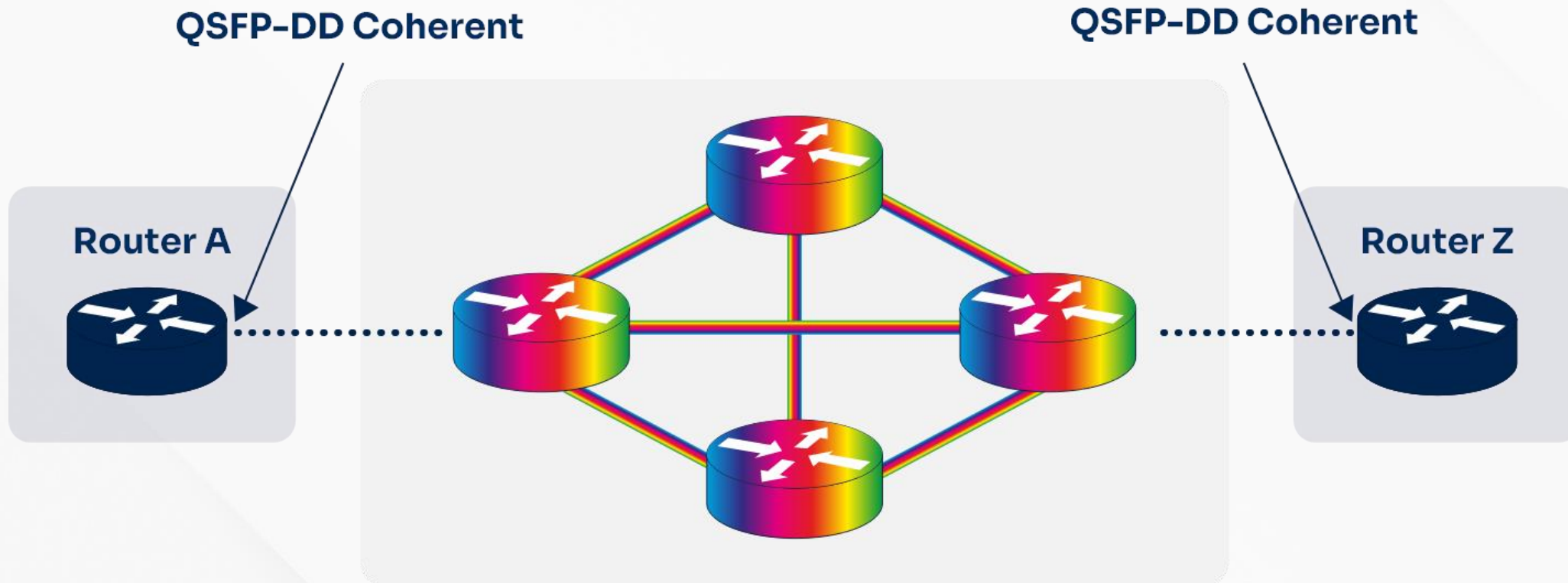
Linking 400G devices

400G to 400G



Most popular: QSFP-DD FR4, QSFP-DD LR4 & QSFP-DD ER8

DWDM Network



Most popular: QSFP-DD 400ZR & QSFP-DD OpenZR+

QSFP28

O-Band

25km without
amplifiers

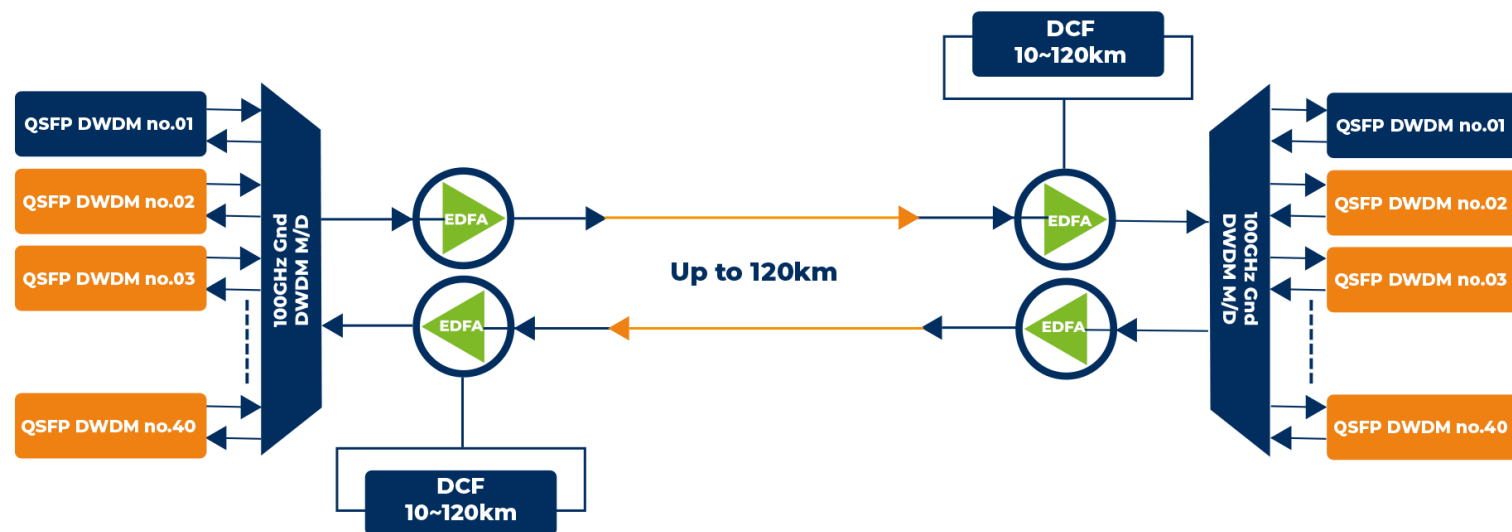


QSFP28

DWDM

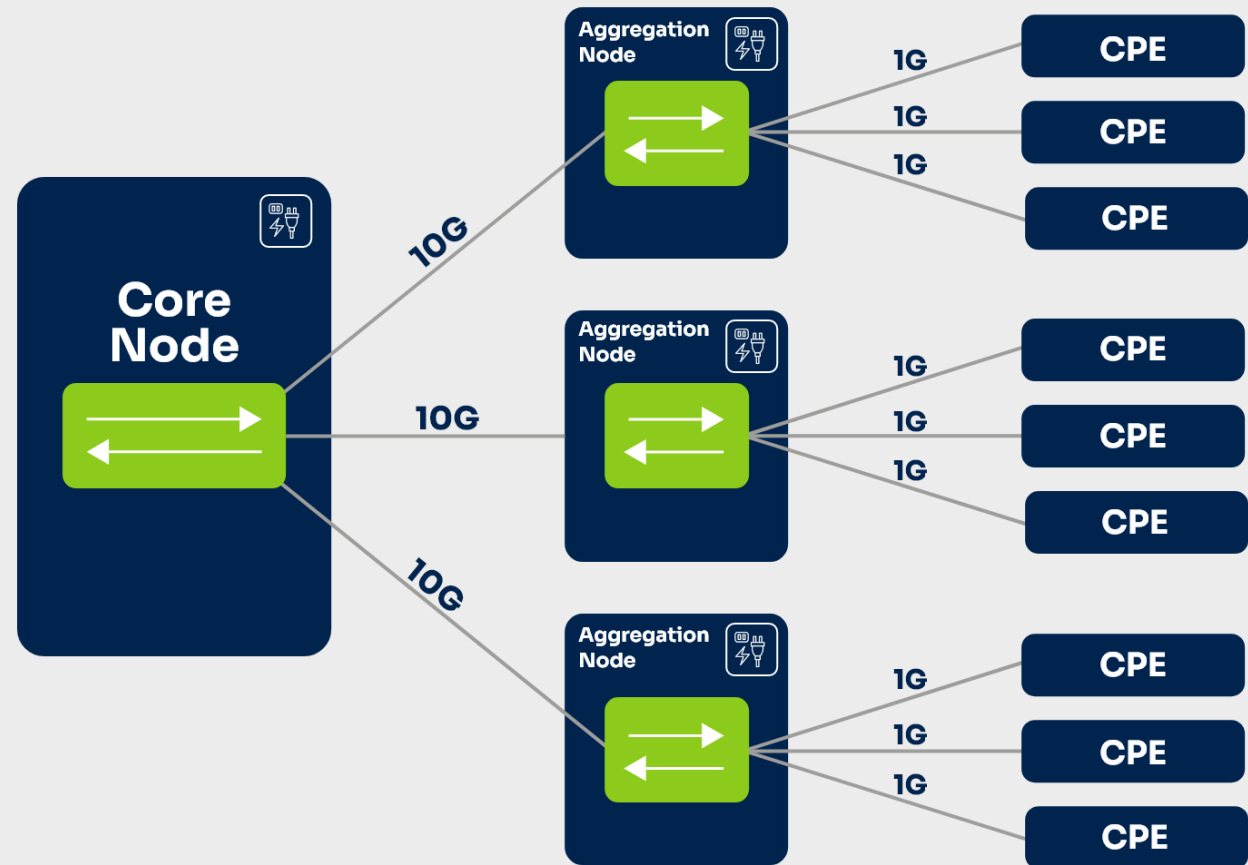
up to 120km

up to 48 channels



Where we could use xWDM?

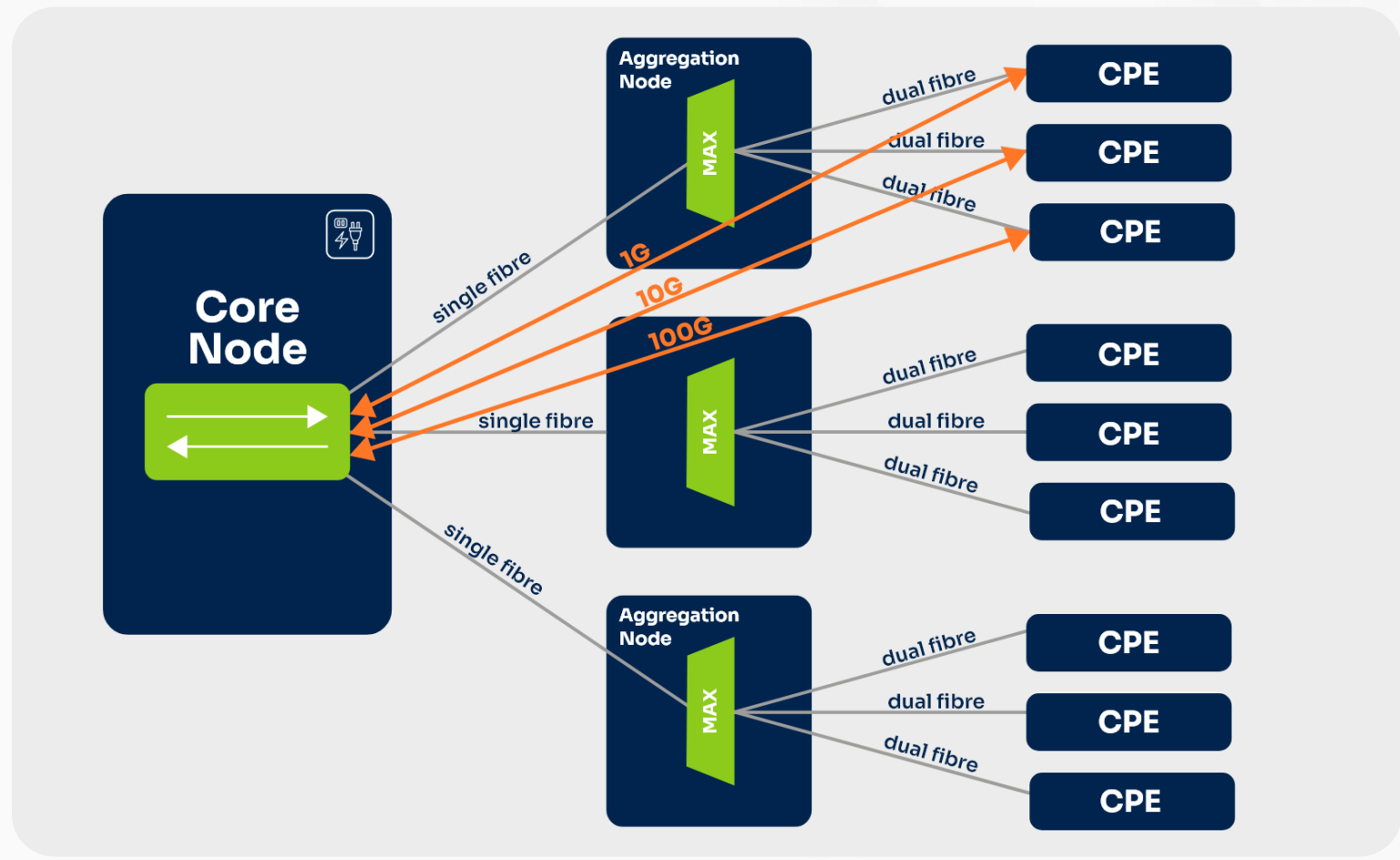
Switch or Multiplexer?



Where we could use xWDM?

Switch or Multiplexer?

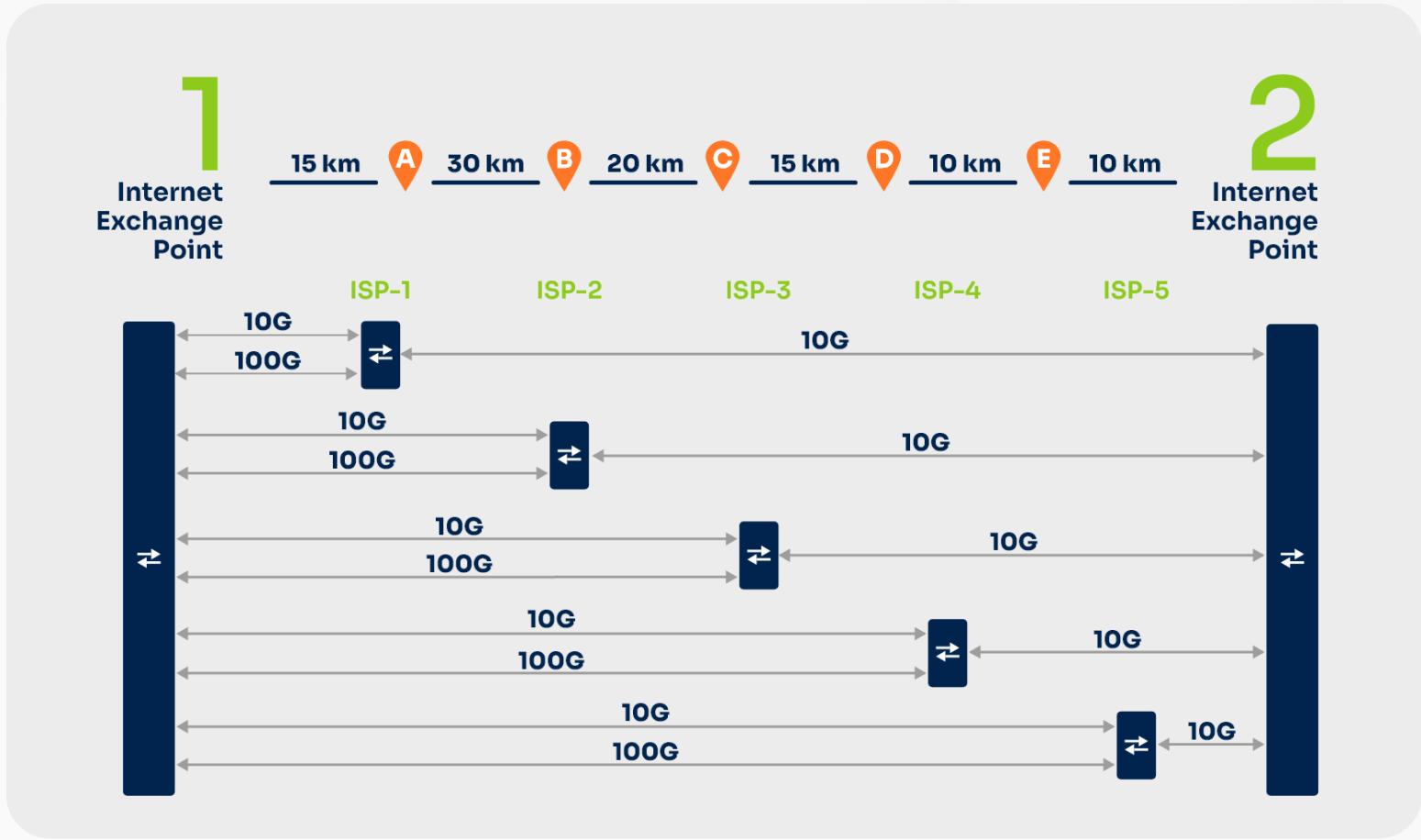
SALUMANUS.COM



Where we could use xWDM?

Sharing fiber for different services

SALUMANUS.COM



Future of optical networks



We need more bandwidth

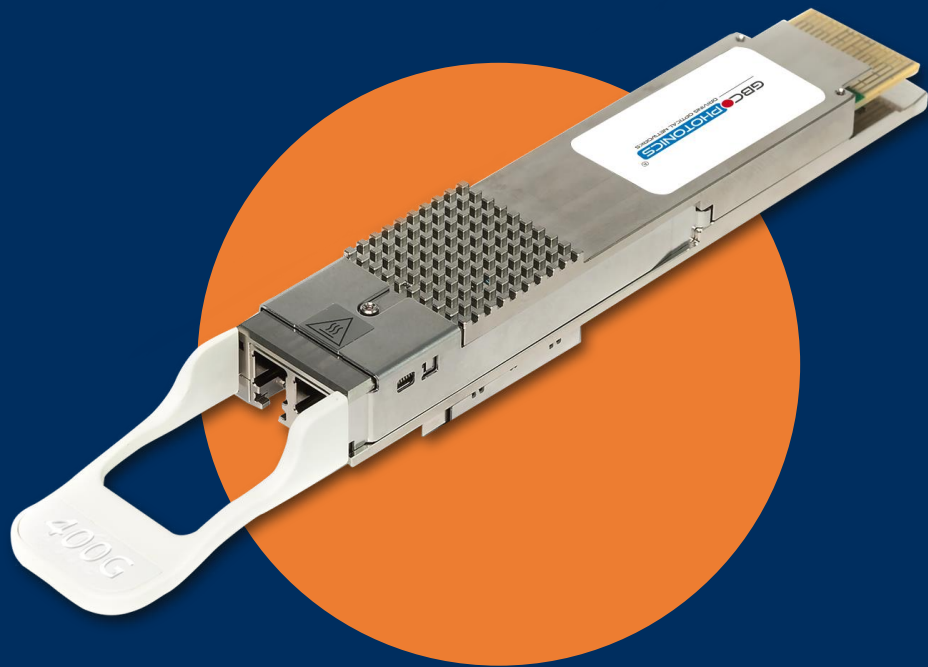


We need more automation



We need more green network

Conclusion and Q&A



Universal
Optical
Transceiver

Open
DWDM
System

Multi-vendor
Network
Monitoring

**We simplify fiber optics network usability
to empower connectivity freedom**



**We simplify fiber optics network usability
to empower connectivity freedom**